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SECTION VI

ECONOMIC INTELLIGENCE

39. DEFINITIONS.

A. ECONOMICS IS THE SCIENCE OF PRODUCTION, DISTRIBUTION AND USE OF WEALTH--THE MATERIAL MEANS OF SATISFYING HUMAN DESIRES. ECONOMICS ANALYZES FACTORS OF PRODUCTION AND HOW THESE FACTORS OF PRODUCTION CAN BE USED TO PRODUCE THE THINGS THAT SATISFY THESE MATERIAL WANTS. THUS ECONOMICS DEALS WITH THE BASIC ASPECTS OF HUMAN LIVING, OF RELATIONS BETWEEN PEOPLE AND NATIONS -- AND IT DEALS WITH THEIR COMPETITION FOR A SHARE OF THE WORLD'S RESOURCES. THAT COMPETITION HAS BEEN, AND CONTINUES TO BE, A MAJOR CAUSE OF WAR.

B. ECONOMIC INTELLIGENCE IS INTELLIGENCE WHICH DEALS WITH THE EXTENT AND UTILIZATION OF THE NATURAL AND HUMAN RESOURCES, AND THE INDUSTRIAL POTENTIAL OF NATIONS. THE POSITION OF THE UNITED STATES AS A MAJOR ECONOMIC POWER MAKES IT INEVITABLE THAT ALMOST ANY ECONOMIC DEVELOPMENT ABROAD IMPINGES IN SOME WAY UPON OUR POSITION IN INTERNATIONAL AFFAIRS. FOR THIS REASON, THE STUDY OF THE NATIONAL ECONOMY OF FOREIGN NATIONS IS ONE OF THE MOST IMPORTANT TASKS OF STRATEGIC INTELLIGENCE. ECONOMIC WEAPONS ARE ACCEPTED AS THE MOST EFFECTIVE MEANS OF INTERNATIONAL CONFLICT SHORT OF DIRECT MILITARY ACTION, AND ECONOMIC POTENTIAL IS THE BEST SINGLE MEASURE OF A NATION'S STRATEGIC CAPABILITIES. ALMOST ALL OF OUR FEDERAL AGENCIES ARE ENGAGED IN THE PRODUCTION OF ECONOMIC INTELLIGENCE IN ONE TYPE OR ANOTHER.

40. POTENTIAL. FROM THE STRATEGIC POINT OF VIEW ECONOMIC INTELLIGENCE HAS THREE OBJECTIVES: (1) TO DETERMINE THE ECONOMIC CAPABILITIES OF NATIONS TO WAGE WAR -- THAT IS, TO DETERMINE THEIR ECONOMIC MILITARY POTENTIAL; (2) TO DETECT THE EXISTENCE AND MEASURE THE EXTENT OF PREPARATIONS FOR WAR OF FOREIGN NATIONS; AND (3) TO ASCERTAIN THE VULNERABILITIES OF FOREIGN ECONOMIES TO DIRECT ATTACK OR TO MEASURES OF ECONOMIC WARFARE.

ECONOMIC INTELLIGENCE FROM THE STRATEGIC POINT OF VIEW REPRESENTS, IN PART, AN ANALYSIS OF THE ABILITY OF NATIONS TO PRODUCE THE MATERIALS OF WAR. IT ASCERTAINS THEIR CAPACITY, UNDER STRESS AND OVER AN EXTENDED PERIOD, TO PRODUCE PHYSICAL WEAPONS -- GUNS AND AMMUNITION, TANKS, AIRCRAFT, AND SHIPS -- AND THE MYRIAD OF OTHER GOODS NEEDED TO SUPPORT MILITARY AND INDUSTRIAL FORCES. IN ANALYZING NATIONAL POWER FROM THIS POINT OF VIEW, THEREFORE, THE INTELLIGENCE OFFICER MUST EVALUATE THE NATURAL RESOURCES OF A NATION, ITS DEGREE OF DEPENDENCE UPON OTHER COUNTRIES FOR MATERIALS, ITS INDUSTRIAL OUTPUT OF BASIC GOODS AND MILITARY SUPPLIES, AND ITS ABILITY TO REDIRECT AND TO EXPAND INDUSTRIAL PRODUCTION FOR WAR PURPOSES.

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41. WAR PREPARATIONS.

A. WAR DEMANDS THE MOBILIZATION OF INDUSTRY AS WELL AS OF MEN. IT REQUIRES ECONOMIC PREPARATIONS -- STOCKPILING OF ESSENTIAL RAW MATERIALS, DEVELOPMENT OF SYNTHETIC SUBSTITUTES, CONVERSION OF BASIC INDUSTRY. THESE ARE EVIDENCE OF INTENT WHICH, TO A CONSIDERABLE DEGREE, MUST PRECEDE OUTRIGHT MILITARY PREPARATIONS.

B. MODERN WAR CALLS FOR SPECIAL AND COMPLETE ORGANIZATION AND CONTROL OF INDUSTRIAL AFFAIRS. SUCH CONTROL INCLUDES THE DIRECTION OF LABOR AND MATERIALS TOWARD PARTICULAR INDUSTRIES AND THE RESTRICTION OF NON-ESSENTIAL CIVILIAN PRODUCTION. IT MEANS PUTTING GUNS BEFORE BUTTER. ADOPTION OF THESE MEASURES OF WAR ECONOMY CONSTITUTES ONE INDICATION OF A NATION'S PROBABLE COURSE OF ACTION.

C. ECONOMIC INTELLIGENCE FROM THE STRATEGIC POINT OF VIEW MUST PROVIDE KNOWLEDGE ESSENTIAL FOR PLANNING DIRECT MILITARY ACTION AND ECONOMIC WARFARE MEASURES THE OBJECT OF WHICH IS TO CONSTRICT, TO WEAKEN, OR TO DESTROY AN ENEMY'S INDUSTRIAL SYSTEM, BOTH BY DENYING HIM THE RAW MATERIALS WHICH HE MUST GET FROM ABROAD AND BY ATTACKING HIS BASIC INDUSTRIES.

D. NATIONAL ECONOMICS MAY BECOME STRONGER OR WEAKER THROUGH THE ACTION OF ECONOMIC LAWS, OR THE ECONOMY MAY BE DISTORTED INTO ARTIFICIAL CHANNELS BY GOVERNMENT RESTRICTIONS AND CONTROLS. THE LATTER ACTION MAY BE DELIBERATELY TAKEN AS A PART OF STRATEGIC PLANNING. MODERN WAR CALLS FOR SPECIAL AND COMPLETE ORGANIZATION AND CONTROL OF INDUSTRIAL AFFAIRS FOR ITS SUCCESSFUL PROSECUTION. SUCH CONTROL INCLUDES THE DIRECTION OF LABOR AND MATERIALS TOWARD PARTICULAR INDUSTRIES, AND THE RESTRICTION OF NON-ESSENTIAL CIVILIAN PRODUCTION. ADOPTION OF THESE MEASURES OF WAR ECONOMY MAY ALSO BE A CLUE TO A NATION'S PROBABLE COURSE OF ACTION. IN THE CASE OF TOTALITARIAN COUNTRIES WHICH OPERATE MORE OR LESS CONTINUOUSLY UNDER A WAR ECONOMY, IT IS ESPECIALLY IMPORTANT TO FOLLOW ANY INDICATION OF CHANGE WITHIN THE EXISTING STRUCTURE. SUCH CHANGES OFTEN INDICATE ACCELERATION OR INTENSIFICATION OF EFFORTS TOWARD MILITARY PREPARATIONS.

42. ECONOMIC WARFARE. ECONOMIC WARFARE MAY TAKE VARIOUS FORMS. IT MAY CONSIST OF DIPLOMATIC AND FINANCIAL PRESSURES DESIGNED TO INDUCE NEUTRAL COUNTRIES TO EASE TRADING WITH THE ENEMY. IT MAY TAKE THE FORM OF PRECLUSIVE BUYING POLICY WHICH THE UNITED STATES APPLIED DURING WORLD WAR II TO KEEP CRITICAL MATERIALS AWAY FROM THE ENEMY. OR IT MAY GO TO THE EXTREME OF MILITARY ACTION DIRECTED TOWARD SEIZURE OR DESTRUCTION OF THE ENEMY'S ECONOMIC RESOURCES. FOR THESE PURPOSES, IT IS NECESSARY TO KNOW THE STRONG AND WEAK POINTS OF NATIONAL ECONOMIES AND OF INTERNATIONAL ECONOMIC RELATIONS.

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43. VULNERABILITY. THE INTELLIGENCE OFFICER, THEREFORE, GIVES THE MILITARY OPERATIONAL PLANNERS ACCURATE INFORMATION ON THE LOCATION AND CHARACTER OF STEEL PLANTS, FREIGHT YARDS, OIL REFINERIES, POWER STATIONS, CHEMICAL PLANTS, AND OTHER INDUSTRIAL INSTALLATIONS. MOREOVER, HIS STUDY OF A SPECIFIC COUNTRY REVEALS INDUSTRIAL BOTTLENECKS AND THE DEGREE TO WHICH MILITARY EFFORT WOULD BE HAMPERED BY THE LOSS OF PARTICULAR MATERIALS OR FACILITIES.

44. FACTORS IN ECONOMIC POTENTIAL.

A. THE ANSWERS TO CERTAIN QUESTIONS WILL HELP IN ASSESSING CAPABILITIES, VULNERABILITIES, AND PROBABLE COURSES OF ACTION OF A NATION. THE INTELLIGENCE OFFICER WANTS TO KNOW WHAT RAW MATERIALS ARE AVAILABLE, IN WHAT QUANTITIES, AND FROM WHAT SOURCES. A DISTINCTION IS USUALLY MADE BETWEEN BASIC FOODSTUFFS AND BASIC INDUSTRIAL MATERIALS. THE LIST OF INDUSTRIAL RAW MATERIALS IS DIVIDED INTO THREE GROUPS: THE METALLIC MINERALS, SUCH AS COPPER; THE NONMETALLIC MINERALS, SUCH AS COAL; AND THE ORGANIC SUBSTANCES, SUCH AS WOOD, RUBBER, AND HIDES.

B. THE SUREST SUPPLY OF A RAW MATERIAL USUALLY IS THAT WHICH LIES WITHIN A COUNTRY'S OWN BOUNDARIES. IN PEACETIME A NATION USUALLY CAN GET MATERIALS FROM ABROAD. BUT DURING A WAR, TRANSPORTATION MAY BE OBSTRUCTED BY BLOCKADE, LACK OF SHIPPING, OR CONGESTION OF RAILROADS OR PORTS. AS IT IS NOT ALWAYS CERTAIN WHICH SIDE WILL CONTROL THE SEA LANES, ESTIMATES OF A NATION'S RAW MATERIAL POTENTIAL MUST TAKE INTO ACCOUNT THE POSSIBLE DISRUPTION OF LINES OF COMMUNICATIONS TO FOREIGN SOURCES OF SUPPLY.

C. IT IS ALSO IMPORTANT TO KNOW WHAT INDUSTRIAL CAPACITY IS AVAILABLE AND WHAT ITS LIMITATIONS ARE FROM THE POINT OF VIEW OF PRODUCTION OF WAR GOODS. A NATION'S INDUSTRIAL CAPACITY IS A PRODUCT OF THE UTILIZATION OF MANPOWER, NATURAL RESOURCES, AND CAPITAL. BUT HIGH INDUSTRIAL POTENTIAL DOES NOT RESULT AUTOMATICALLY FROM POSSESSION OF THESE ELEMENTS. SOME COUNTRIES - CHINA, FOR EXAMPLE - HAVE ABUNDANT MANPOWER AND EXTENSIVE DEPOSITS OF MINERALS, BUT ARE DEFICIENT IN MINES AND FACTORIES. ON THE OTHER HAND, COUNTRIES SUCH AS THE NETHERLANDS HAVE IMPORTANT INDUSTRIES IN SPITE OF BEING POOR IN KEY RAW MATERIALS.

D. THE ADAPTABILITY OF A NATION'S PRODUCTIVE CAPACITY TO WAR NEEDS DEPENDS TO A CONSIDERABLE DEGREE UPON PEACETIME ECONOMIC POLICIES. SOMETIMES COMPETITIVE PRIVATE ENTERPRISE HAS BEEN RELIED UPON, WITH RELATIVELY LITTLE STATE INTERFERENCE, TO ACHIEVE THE MAXIMUM DEGREE OF INDUSTRIAL DEVELOPMENT. IN THE UNITED STATES THIS POLICY HAS PRODUCED A HIGH DEGREE OF EFFICIENCY AND AN INDUSTRIAL ESTABLISHMENT WELL ADJUSTED TO COMPETITION. A SHORTCOMING OF SUCH AN ECONOMIC POLICY IN RELATION TO WAR, HOWEVER, IS THE UNDERDEVELOPMENT OF PRODUCTION IN SOME LINES THAT ARE OF PARAMOUNT IMPORTANCE IN WARTIME.

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E. IN CONTRAST TO THIS POLICY OF RELIANCE ON PRIVATE INITIATIVE, THERE ARE MANY DEGREES OF GOVERNMENT CONTROL. THROUGH VARIOUS DEGREES OF CONTROL, INCLUDING GOVERNMENT OWNERSHIP A NATION MAY DEVELOP A CLOSE APPROXIMATION TO A WAR ECONOMY IN TIME OF PEACE. THIS SITUATION PREVAILED IN GERMANY FOR SEVERAL YEARS BEFORE 1939. THE U.S.S.R. HAS BEEN ON SUCH A BASIS FOR A GENERATION.

F. ONCE A WAR HAS BEGUN, EVEN A COUNTRY COMMITTED TO THE PRINCIPAL OF FREE ENTERPRISE FINDS IT NECESSARY TO IMPOSE CLOSE CONTROLS. THERE ARE WAYS, HOWEVER, IN WHICH SUCH A COUNTRY MAY PREPARE IN ADVANCE FOR THE ADJUSTMENT OF PEACETIME INDUSTRY TO WAR NEEDS. AN EXAMPLE OF THIS IS THE PLACING IN PEACETIME OF "EDUCATIONAL" ORDERS FOR SMALL QUANTITIES OF MILITARY EQUIPMENT SO THAT MANUFACTURERS CAN BECOME FAMILIAR WITH THE PROBLEM WHICH THEY WILL ENCOUNTER IN TIME OF WAR. ADVANCE PLANNING FOR INDUSTRIAL MOBILIZATION CAN HELP A NATION TO AVOID A SHORTAGE OF ESSENTIAL ITEMS IN CASE OF WAR.

G. THE ABILITY TO PRODUCE GOODS DEPENDS UPON MANY CONSIDERATIONS IN ADDITION TO THE AVAILABILITY OF RAW MATERIALS AND INDUSTRIAL CAPACITY. AMONG THE MOST IMPORTANT OF THESE ARE: THE AVAILABILITY OF LABOR, ESPECIALLY SKILLED WORKERS; AN ADEQUATE TRANSPORTATION SYSTEM; STABILITY OF THE COUNTRY'S FINANCIAL STRUCTURE; AND EFFICIENCY IN EXECUTION OF GOVERNMENT ECONOMIC POLICIES.

#### 45. ECONOMIC MOBILIZATION.

A. THE ABILITY TO RECOGNIZE WHEN A NATION IS MOBILIZING ECONOMICALLY FOR WAR IS VITAL BECAUSE THE EXTENT TO WHICH A NATION HAS MOBILIZED OR IS MOBILIZING ECONOMICALLY IS ONE SIGNIFICANT INDICATION OF ITS PROBABLE COURSE OF ACTION. THE TERM ECONOMIC MOBILIZATION MEANS THE CHANGING OF A NATION'S WAR POTENTIAL INTO ACTUAL WAR ENERGIES. THE AIM OF A WAR ECONOMY IS TO ENSURE THE MAXIMUM UTILIZATION OF THE NATION'S MANPOWER, MATERIALS, AND EQUIPMENT IN THE EFFORT TO DEFEAT THE ENEMY.

B. TO MOBILIZE ECONOMICALLY FOR WAR REQUIRES AT LEAST FOUR STEPS. ALL AVAILABLE MANPOWER MUST BE UTILIZED TO PROVIDE ADEQUATE PERSONNEL FOR THE ARMED FORCES AND, AT THE SAME TIME, TO ALLOT SUFFICIENT WORKERS TO THE PRODUCTION OF WAR MATERIALS AND ESSENTIAL CIVILIAN GOODS. LABOR MUST BE DIRECTED INTO THE NECESSARY CHANNELS THROUGH A SYSTEM OF FREEZES, PRIORITIES, AND DRAFTS. TO CURTAIL CIVILIAN PRODUCTION AND EXPAND WAR PRODUCTION, THE FLOW OF RAW MATERIALS MUST BE CONTROLLED SO THAT ESSENTIAL PRODUCTION IS SUPPLIED ADEQUATELY. AS AN AID TO FINANCING THE WAR AND TO SMOOTH OPERATION OF THE ECONOMIC SYSTEM, IT IS NECESSARY TO ESTABLISH A SYSTEM OF PRICE CONTROLS. THE RATIONING OF SCARCE CIVILIAN GOODS IS IMPERATIVE TO INSURE THE MAXIMUM EFFICIENCY AND HIGHEST MORALE OF THE POPULATION.

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C. THE TOTALITARIAN COUNTRIES, ON THE OTHER HAND, WITH THEIR CONTROLLED ECONOMIC SYSTEMS ARE IN A MUCH BETTER TECHNICAL POSITION THAN THE FREE-ENTERPRISE COUNTRIES SO FAR AS ECONOMIC MOBILIZATION FOR WAR IS CONCERNED. EVEN IN TIME OF PEACE, THEY HAVE NUMEROUS CONTROLS ALREADY IN OPERATION WHICH GOVERN INVESTMENTS, PRODUCTION, FOREIGN TRADE, PRICES, WAGES, AND EMPLOYMENT.

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SECTION VII

SCIENTIFIC INTELLIGENCE

46. GENERAL.

A. SCIENTIFIC INTELLIGENCE IS THE STUDY OF THE SCIENTIFIC CAPACITIES AND ACTIVITIES OF ALL NATIONS. NO SIGNIFICANT CHANGES ARE LIKELY TO OCCUR IN THE TECHNIQUES OF MODERN WAR OR IN THE PRODUCTION OF NEW WEAPONS WITHOUT THE AID OF SCIENCE. HENCE THE INTELLIGENCE OFFICER MUST DO HIS UTMOST TO LEARN ABOUT THE ACTIVITIES OF FOREIGN SCIENTISTS, THE RESEARCH AND DEVELOPMENT PROGRAMS, AND THE SCIENTIFIC ORGANIZATIONS OF FOREIGN NATIONS, THE FUNDS AVAILABLE FOR SCIENTIFIC STUDY, AND THE DISCOVERIES AND INVENTIONS STEMMING FROM THESE ACTIVITIES. SCIENTIFIC INTELLIGENCE, MOREOVER, IS CONTRIBUTORY TO OTHER COMPONENTS OF STRATEGIC INTELLIGENCE, ESPECIALLY ECONOMIC, TELECOMMUNICATIONS, AND ARMED FORCES INTELLIGENCE.

B. SCIENTIFIC ACTIVITIES MAY BE DIVIDED INTO BASIC OR PURE SCIENTIFIC RESEARCH AND APPLIED SCIENCE. THE MILITARY RESEARCH AND DEVELOPMENT PROGRAM IS A PARTICULAR PHASE OF THE LATTER THAT IS OF PRIMARY INTEREST TO THE INTELLIGENCE WORKER. THIS LATTER IS OF MOST IMPORTANCE TO THE MILITARY AND IS OFTEN IDENTIFIED AS TECHNICAL INTELLIGENCE. BUT THE FORMER IS A KEY TO NATIONAL POTENTIAL.

47. POTENTIAL. THIS HISTORY AND TRADITIONS OF A NATION'S SCIENTIFIC ENDEAVOR WILL LARGELY DETERMINE THE GOVERNMENT'S ATTITUDE TOWARD SCIENCE. THE KNOWLEDGE OF THIS ATTITUDE WILL AID THE INTELLIGENCE OFFICER IN ESTIMATING THE ROLE OF THE SCIENTISTS IN THE COUNTRY UNDER CONSIDERATION AND THE PARTICULAR FIELDS OF RESEARCH THAT ARE RECEIVING MAJOR ATTENTION. AN IMPORTANT FACTOR IN DETERMINING ITS SCIENTIFIC POTENTIAL IS THE RATE AT WHICH A COUNTRY IS TRAINING ITS NEW SCIENTISTS AND THE QUALITY OF THEIR TRAINING.

48. NEW WEAPONS AND EQUIPMENT.

A. AN IMPORTANT TASK OF SCIENTIFIC INTELLIGENCE IS THE FORECASTING OF NEW WEAPONS AND EQUIPMENT OF FOREIGN ARMED FORCES. A STUDY OF THE SCIENTIFIC RESEARCH BEING CONDUCTED IN A COUNTRY WILL REVEAL DISCOVERIES WHICH MAY LATER BE APPLIED IN THE DEVELOPMENT OF NEW WEAPONS AND TECHNIQUES. THESE DISCOVERIES OCCUR IN THE OBVIOUS FIELDS OF SCIENTIFIC ENDEAVOR SUCH AS ELECTRONICS AND ATOMIC ENERGY. HOWEVER, THE POSSIBILITY THAT IMPORTANT DEVELOPMENTS MAY OCCUR IN LESS OBVIOUS FIELDS SHOULD NOT BE IGNORED. SYNTHETIC MATERIALS OR SUBSTITUTES DEVELOPED BY SCIENCE HAVE ENABLED NATIONS TO WAGE WAR IN SPITE OF SHORTAGES OF MATERIALS

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